

## REMARKS

In the Official Action mailed on **4 June 2007**, the Examiner reviewed claims 1-6, 8-14, 16-22 and 24. Claims 1-6, 8-14, 16-22, and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Elfering (WO 01/18631, hereinafter “Elfering”), in view of Shiu et al. (GB 2386710A hereinafter “Shiu”).

### Rejections under 35 U.S.C. §103(a)

Independent claims 1, 8, and 17 were rejected as being unpatentable over Elfering in view of Shiu. Applicant respectfully points out that Elfering discloses **a client which computes a hash** for an identifier associated with data. This hash and the data are then **sent to a database**. To retrieve the data, **the client decodes the hash** to re-identify the data owner and the associated data (see Elfering, page 1, lines 29-37, and page 2, lines 5-13). Note that, for Elfering to decode the hash, **the hash cannot be a one-way hash**.

Furthermore, Applicant respectfully points out that Shiu discloses a **policy enforcement component** (or control point), which enforces a data access policy. This control point **authenticates an access policy**, which **arrives with a document**, and if it is valid, the control point encrypts or decrypts the document. Note that any **enforcement of this access policy occurs at the control point**, which is separate from the database (see Shiu, page 3, lines 24-27, page 8, lines 24-28, page 10, line 22, page 13, lines 13-30, page 14, lines 4-6, and FIG. 4).

In contrast, the present invention teaches receiving an item of **private information which serves as a key** (an index) to access information in a database. The system of the present invention then determines if **metadata associated with the column** that stores this private information indicates that the column stores private information. If so, the database creates a **one-way hash** of the private information and stores the one-way hash in the column without assistance from a client or application (see page 5, paragraph [0020], lines 9-11,

paragraph [0021], page 6, paragraph [0022], lines 2-3, and paragraph [0023], lines 23-23 of the instant application).

There is nothing within Elfering or Shiu, either separately or in concert, that discloses determining if metadata associated with a column indicates that the column stores private information. Furthermore, there is nothing within Elfering or Shiu, either separately or in concert, that discloses the database creating a one-way hash for the private information in response to determining that the column is marked private. In contrast, the combination of Elfering and Shiu discloses enforcing a policy at a control point before granting access to a database. Furthermore, the combination of Elfering and Shiu discloses using a reversible hash that is created by a client. Thus, the combination of Elfering and Shiu requires both reconfiguration of each client that accesses the database and the addition of a separate policy enforcement engine that is independent from the database. In contrast, the present invention teaches configuring the database to protect private information that serves as an index for data stored in the database by storing the one-way hash of the private information at the database.

Accordingly, Applicant has amended independent claims 1, 8, and 17 to clarify that the item of private information is used as a key for retrieving data from the database, and that the hash is a one-way hash. These amendments find support on page 5, paragraph [0020], lines 9-11, paragraph [0021], page 6, paragraph [0022], lines 2-3, and paragraph [0023], lines 23-23 of the instant application. No new matter has been added.

Hence, Applicant respectfully submits that independent claims 1, 9, and 17 as presently amended are in condition for allowance. Applicant also submits that claims 2-6 and 8, which depend upon claim 1, claims 10-14 and 16, which depend upon claim 9, and claims 18-22 and 24, which depend upon claim 17, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

### CONCLUSION

It is submitted that the present application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

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